

BOLOTIN, L.I.; KLYUCHAREV, A.P.; KULYGIN, Yu.F.; RANYUK, Yu.N.;
REVUTSKIY, Ye.I.; RUTKEVICH, N.Ya.

Interaction between the ions of carbon and the nuclei of the
photocollusion. Izv. AN SSSR Ser. fiz. 24 no.12:1502-1504 D '60.
(MIRA 13:12)

1. Fiziko-tehnicheskiy institut AN USSR.
(Photography, Particle track)
(Carbon)

KLYUCHAREV, A.P.; RUTKEVICH, N.Ya.

Elastic proton scattering by chromium isotopes at an energy of
5.40 Mev. Zhur. eksp. i teor. fiz. 38 no.1:285-287 Jan '60.
(MIRA 14:9)

1. Fiziko-tehnicheskiy institut AN Ukrainsk SSR.
(Protons--Scattering) (Chromium--Isotopes)

24.6590
24.6810

21(8)
AUTHORS:

Rutkevich, N. Ya., Golovnya, V. Ya., B013/B014
Val'ter, A. K., Academician of the AS UkrSSR, Klyucharev, A. P.
68606
S/020/60/130/05/015/061

TITLE: Angular Distribution of 5.45-Mev Protons Scattered Elastically
by Nickel-, Copper-, and Cobalt Isotopes

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 5, pp 1008-1011
(USSR)

ABSTRACT: The present paper describes the determination of this angular distribution with initial proton energies of 5.45 Mev, which is below the potential threshold of the target nuclei by about 1.5 Mev. The protons accelerated to 5.45 Mev by a linac travel through a magnetic analyzer with a deflection of 24°, a system of collimating diaphragms, and incide upon a target made of a thin foil, which had been put in a vacuum chamber. The scattered protons were then recorded by photographic plates which were arranged at angles of from 20° to 160° with respect to the incident beam. Nuclear emulsions of 100 μ were used. Figure 1 illustrates the geometrical arrangement of the experiment. Table 1 gives the

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Angular Distribution of 5.45-Mev Protons
Scattered Elastically by Nickel-, Copper-,
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composition and thickness of the metallic foils which served as targets. The electron flux was measured by means of a beam catcher with a current integrator. Figure 2 shows the energy distribution of protons scattered by Ni⁶² at 140°. The group of elastically scattered protons can be separated reliably from the nonelastically scattered protons. The half-width of the maximum corresponding to the elastically scattered protons is \pm 100 kev. The non-monochromaticity of the primary protons is thus \pm 100 kev at most. The first energy level is above 1 Mev for all even-even nickel isotopes. Co⁵⁹ has its first level at 1.1 Mev and Cu⁶⁵ at 0.77 Mev. The energy spectra of protons scattered by these nuclei indicated the existence of isolated elastic groups. In all cases, the elastically scattered protons could be separated reliably from the total spectrum. Figure 3A shows the angular distribution of protons elastically scattered by cobalt and the isotopes of nickel and copper. Measurements made by various methods (scintillation crystal ✓)

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Scattered Elastically by Nickel-, Copper-,
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with photomultiplier, photographic camera) yield consistent results. Figure 3B illustrates the angular distribution for a summation of the experimental data, for the three nickel isotopes under consideration, and for naturally-occurring nickel. Figure 4 shows the angular distribution of protons elastically scattered by the nuclei Ni⁵⁸, Ni⁶⁰, and Ni⁶². The height of the maximum and the depth of the minimum are different, and the position of the minimum is markedly shifted toward smaller angles with increasing mass number of the scatterer. The angular distribution of protons scattered by copper and cobalt is qualitatively equal, but at large angles it differs noticeably from the scattering by nickel isotopes. The angular distribution of protons elastically scattered by

Cu⁶³ is qualitatively similar to that for Cu⁶⁵. The addition of two neutrons to the nucleus changes scattering as a function of the angle only to a small extent. This is also indicated by results obtained by the authors for nickel, which are, however, insufficient for general conclusions. It is therefore

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Angular Distribution of 5.45-Mev Protons
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and Cobalt Isotopes

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S/020/60/130/05/015/061
B013/B014

necessary to carry out further experiments on elastic scattering by various nuclei. There are 4 figures, 1 table, and 10 references, 4 of which are Soviet.

ASSOCIATION: Fiziko-tehnicheskiy institut Akademii nauk USSR
(Institute of Physics and Technology of the Academy of Sciences of the UkrSSR)

SUBMITTED: August 13, 1959

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S/903/62/000/000/015/044
B102/B234

AUTHORS: Bolotin, L. I., Klyucharev, A. P., Rutkevich, N. Ya.,
Revutskiy, Ye. I., Rudyak, B. I.

TITLE: Angular distributions of 5.4-Mev protons elastically scattered
from Ca, Ni and Zn isotopes

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy
Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by
A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 180-184

TEXT: Elastic proton scattering was investigated with even-even isotopes
exhibiting great differences in their neutron numbers: Ca⁴⁰ and Ca⁴⁸, Ni⁵⁸
and Ni⁶⁴ and Zn⁶⁴ and Zn⁶⁸. The protons were accelerated with a linear ac-
celerator to 5.40 Mev and were, after scattering, recorded by photographic
plates arranged about the incident beam in the interval 20-160°C. The
targets were thin foils (1.12 - 3.0 μ) enriched in the isotope to be in-
vestigated. The angular distributions of the protons were measured and are
represented in a plot with θ c.m.s. as abscissa and

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Angular distributions of...

S/903/62/000/000/015/044
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$[N(\theta)/N(120^\circ)]/[(\sin\theta/2)^4/(\sin 60^\circ)^4]$ as ordinate. The ratio at 160° between the measured cross section and the Coulomb cross section is, for Ca⁴⁸, smaller by a factor of 2.5 than for Ca⁴⁰; for Ni⁶⁴ smaller by a factor of 1.9 than for Ni⁵⁸; and for Zn⁶⁸ smaller by a factor of 1.3 than for Zn⁶⁴. The large-angle maxima may be explained by a considerable contribution of scattering with compound-nucleus formation. The possible decay channels are (p,n), (p,p), (p,p), (p, α) and (p, γ), the two latter are of little probability. The (p,n) reaction thresholds were also determined. They were 15.0 and 0.52 for Ca^{40,48}, 10.48 and 2.45 for Ni^{58,64} and 8.0 and 3.81 for Zn^{64,68}, i.e. for even isotopes they decrease with increasing neutron number. There are 5 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR (Physicotechnical Institute AS UkrSSR)

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S/903/62/000/000/025/044
B102/B234

AUTHORS: Elyucharev, A. P., Rutkevich, N. Ya., Ranyuk, Yu. N.,
Bolotin, L. I., Kulygin, Yu. F., Revutskiy, Ye. I.

TITLE: Nuclear reactions induced by heavy ions

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh, trudy
Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by
A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 329-333

TEXT: Nuclear photoemulsions НИКФИ (NIKFI)(type D) were irradiated by carbon (112 Mev) and beryllium ions (84 Mev) and then subjected to microscopic scanning. On the average 2200 Be ions (or 4400 C ions) were necessary for producing one star. A total of 130 stars due to Be and of 140 due to C ion bombardment were analyzed. The events may be attributed to two groups: collisions with light (C,N,O,H) and heavy (Br,Ag) nuclei, and among them to three groups: production of singly-, doubly, or multiply charged particles. Since it was not possible to identify the prongs the stars were analyzed on the basis of the particle evaporation from compound nuclei. The reaction products were alphas and protons with $\alpha/p = 10$ for light and $\alpha/p \approx 20$ for heavy nuclei. For C, N, O + C the main reactions were

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Nuclear reactions induced by heavy ions

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2α , 3α , $p2\alpha$, ap , and α (enumerated according to decreasing probability) and for Br, Ag + C they were 2α , α , ap , 3α , p , $p2\alpha$; for C, N, O + Be they were 2α , α , 3α , pa and 5α (the latter two with equal probability) and for Br, Ag + Be 2α , α , $2p\alpha$, p . Also energy spectra and angular distributions were measured. The course of the latter indicates the considerable contribution made by direct processes. It could be shown that the six-pronged stars observed were formed by α -particles, the disintegration products of the carbon projectile. There are 7 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR (Physicotechnical Institute AS UkrSSR)

Card 2/2

S/056/62/043/003/006/063
B125/B102

AUTHORS: Klyucharev, A. P., Rutkevich, N. Ya.

TITLE: Elastic scattering of 5.45-Mev protons by Mg isotopes

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 3(9), 1962, 775 - 776

TEXT: The angular distribution of 5.45-Mev protons scattered from Mg targets was studied by the same methods as in the paper of N. Ya. Rutkevich et al. (DAN SSSR, 130, 1009, 1960). The targets, free foils of a thickness of 34, were enriched in 99.7% Mg²⁴, 90.6% Mg²⁵, and 93% Mg²⁶, respectively. For Mg²⁵ the total spectral distribution of the protons was taken and the group comprising elastically scattered particles was separated. From 20° to 160° (c.m.s) the quantity $[N(\theta)/N(20^\circ)] / [\sin(\theta/2)/\sin 10^\circ]^4$ for Mg²⁵ and Mg²⁶ increases slowly and after that more rapidly in a qualitatively similar way. For Mg²⁴ this quantity rapidly increases from ~60° to ~80°, remains constant up to ~120°, and beyond 120° again increases rapidly. The elastic scatterings

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Elastic scattering of...

S/056/62/043/003/006/063
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were attended by reactions mostly with charged particles. When Mg^{25} and Mg^{26} were bombarded with protons the compound nuclei Al^{26} were formed having excitation energy 11.8 Mev, and Al^{27} having 13.7 Mev. At these excitation energies the levels are so close together that resonance excitation at energy differences of 100 kev among the primary protons is impossible. The angular distribution of the scattered protons which have passed the stage of a compound nucleus is smooth. Between 6 and 6 Mev the compound nucleus Al^{25} with excitation energy 7.9 Mev, arising when a proton is captured by an Mg^{24} nucleus, has levels that are sufficiently distant from one another for proton resonance capture and subsequent emission of a charged particle to be possible. There is 1 figure.

ASSOCIATION: Fiziko-tehnicheskiy institut Akademii nauk Ukrainskoy SSR
(Physicotechnical Institute of the Academy of Sciences
Ukrainskaya SSR)

SUBMITTED: March 28, 1962

Card 2/2

S/056/62/043/004/019/061
B102/B180

AUTHORS: Berezhnoy, Yu. A., Klyucharev, A. P., Ranyuk, Yu. N.,
Rutkevich, N. Ya.

TITLE: Total nuclear disintegration reactions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 4(10), 1962, 1248 - 1252

TEXT: In order to study the peculiarities of the alpha-group structure of light nuclei, the reaction $C^{12} + C^{12} \rightarrow 6\alpha$ was investigated with 300-400/ μ linear accelerator of the Khar'kovskiy fiziko-tehnicheskiy institut (Khar'kov Physicotechnical Institute). Besides the alpha-particle energy and angular distributions, the excitation function (Fig. 4) was also measured from the threshold (described by ∇) up to 115 Mev (laboratory system). The angular distribution of the alphas, given by $d\eta / \sin \theta f(\theta)$ is symmetrical with a flat minimum at 90° , the energy distribution, $d\eta / dw = f(w)$, is shown in Fig. 3. These functions are calculated with the statistical model of

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s/056/62/043/004/019/061
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Total nuclear disintegration ...

direct nuclear disintegration.

$$\frac{dn}{2\alpha \sin \theta d\theta} = \frac{N_0 e^{-u}}{\sqrt{2\pi \Gamma(3/2, u)}} \int_0^{u/2} \exp\{x(1 + \cos^2 \theta)\} I_0(x \sin^2 \theta) x^{1/2} dx. \quad (6)$$

$$\frac{dn}{dw} = \frac{2\alpha N_0 \mu e^{-u}}{\sqrt{\pi} \Gamma(3/2, u)} e^{-\omega w} \int_0^{w/2} \operatorname{sh}\left(\sqrt{\frac{w}{\epsilon}} \sin x\right) \cos^2 x dx. \quad (7)$$

tained using the notations from Fig. 5 and $N_0 = \int dn$, $u = \mu \beta^2 R^2 / 2\alpha$, μ is the α -particle mass, $w = p^2 / 2\mu$ its energy and $m_z = p \beta \sin \theta \cos(\psi - \phi)$ its angular momentum. The phenomenological constants α and β are determined from the total energy and the total momentum.

$$E_0 = \frac{N_0 u \Gamma(1/2, u)}{2\alpha \Gamma(3/2, u)}, \quad M_0 = \frac{2N_0 u}{\beta} \left[1 - \frac{\Gamma(3/2, u)}{u \Gamma(1/2, u)} \right]. \quad (4) \quad \Gamma(a, b) = \int_0^b e^{-x} x^{a-1} dx.$$

From the measurements $N_0 = 6$, $E = 36$ Mev $M_0 \approx 15$ and $R = 5f$ were found, so that with (4) $1/\alpha = 2.3$ Mev, $1/\beta = 1.2f$ and $u = 2$ was obtained. The excita-

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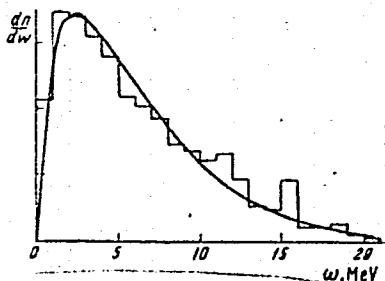
Total nuclear disintegration ...

S/056/62/043/004/019/061
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tion curve was calculated with the Sachs formula (Phys. Rev. 103, 671, 1956). The theoretical results (solid lines in the diagrams) agree very well with the measured ones. There are 5 figures.

SUBMITTED: May 18, 1962

Fig. 3.



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Fig. 4.

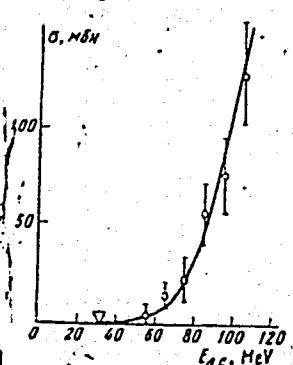
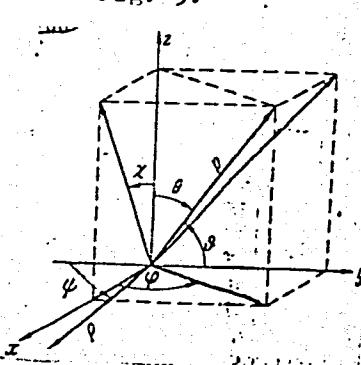


Fig. 5.



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L 13617-63

EWT(m)/BDS AFFTC/ASD

S/0056/63/044/006/1753/1759

58
52

ACCESSION NR: AP3003093

AUTHOR: Klyucharev, A. P.; Krivets, G. Ye.; Rutkevich, N. Ya.

TITLE: The (p, Alpha) reaction at 20 MeV

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 1753-1759

TOPIC TAGS: proton induced alpha emission, mass number dependence, natural cobalt, natural platinum, enriched copper, enriched nickel, enriched zinc, enriched tin, compound nucleus, direct interaction

ABSTRACT: The (p, Alpha) reaction was investigated on cobalt and platinum of natural isotopic composition and on various isotopes of nickel, cooper, zinc, and tin. The present investigation was aimed at tracing in greater detail the dependence of the properties of the (p, Alpha) reaction on the mass number of the target, and is the first investigation in which targets of other than natural isotopic composition are used. The 20.5 MeV bombarding protons were produced in a linear accelerator, and the targets were free-standing foils. The Alpha particles resulting from the reaction were registered by specially developed nuclear emulsions placed at various angles to the direction of the incident protons. The emulsions made it possible to distinguish between protons and Alpha particles. The differential cross section of the reaction was found to decrease with in-

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BEREZHNOY, Yu.A.; KLYUCHAREV, A.P.; RANYUK, Yu.N.; RUTKEVICH, N.Ya.

Mechanism underlying total nuclear decay. Zhur. eksp. i teor. fiz.
45 no.4:1030-1035 O '63. (MIRA 16:11)

1. Fiziko-tekhnicheskiy institut AN UkrSSR.

SHUMILOV, S.N.; KLYUCHAREV, A.P.; RUTKEVICH, N.Ya.

Reactions yielding three α -particles in B interaction
with light nuclei. Zhur. eksp. i teor. fiz. 45 no.5:1356-
1359 N '63. 10 (MIRA 17:1)

1. Fiziko-tehnicheskiy institut AN UkrSSR.

KLYUCHAREV, A. P.; PANYUK, Yu. N.; RUTKEVICH, N. Ya.; SHUMILOV, S. N.

"Concerning Reactions of Total Disintegration of Nuclei."

report submitted for All-Union Conf on Nuclear Spectroscopy, Tbilisi,
14-22 Feb 64.

SHUMILOV, S.N.; KLYUCHAREV, A.P.; RUTKEVICH, N.Ya.

Capture of a deuteron and an alpha particle in $B^{10} - O^{16}$
interaction. Pis'. v red. Zhur. eksper. i teoret. fiz. 2
no.5:213-215 S '65. (MIRA 18:12)

1. Fiziko-tehnicheskiy institut AN Ukrainskoy SSR. Submitted
July 5, 1965.

SHUMILOV, S.N.; KLYUCHAREV, A.P.; RUTKEVICH, N.Ya.

Reactions in complete nuclear decay. Pis'. v red. Zhur. eksper.
i teoret. fiz. 2 no. 7:347-351 O '65. (MIRA 18:12)

1. Submitted Aug. 6, 1965.

L 17602-66 EWT(m)/T

ACC NR: AP6002714

SOURCE CODE: UR/0056/65/049/006/1754/1763^{ss}

AUTHORS: Shumilov, S. N.; Klyucharev, A. P.; Rutkevich, N. Ya.⁴⁸
B

ORG: Physicotechnical Institute, Academy of Sciences UkrSSR
(Fiziko-tehnicheskiy institut Akademii nauk UkrSSR)

TITLE: Deuteron and Alpha-particle pickup in the interaction between B-10 and O-16^{19,44,55}

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49,
no. 6, 1965, 1754-1763

TOPIC TAGS: nuclear emulsion, alpha interaction, ion interaction,
deuteron interaction, boron, oxygen, nitrogen, excitation energy

ABSTRACT: The authors studied the reaction $O^{16} + B^{10} \rightarrow N^{14} + 3\alpha$ -
2.8 MeV between 100-MeV B^{10} ions and O^{16} nuclei in nuclear emulsion.
In contrast with earlier investigations of transfer reactions, the
authors have registered all the reaction products simultaneously, to-
gether with their characteristic energies and momenta. 400- μ NIKFI-B

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L 17602-66

ACC NR: AP600271⁴

7

nucleon emulsions were irradiated with B^{10} ions accelerated to 100 MeV in the linear accelerator of the Ukrainian Physicotechnical Institute. The ions entered the emulsion at 25° to the surface. The reaction represented by each star in the emulsion was identified by kinematic analysis, using an Ural-2 computer. The excitation function of the reaction was found to have a maximum at 60 MeV B^{10} energy. The c.m.s. N^{14} angular distribution has both a small-angle and a large-angle maximum, due to the α -particle and deuteron pickup from O^{16} respectively. The reaction proceeds via formation of a C^{12} nucleus, whose excitation and decay into three α particles are studied. A mechanism is proposed for the described pickup reaction, based on the assumption that a deuteron cluster is picked up from the O^{16} by the B^{10} . Arguments in favor of this mechanism are advanced. Authors thank Ye. V. Inopin and V. G. Neudachin for valuable discussions and Ye. V. Cherkavskaya, V. N. Yemlyaninova, Ye. K. Panteleyeva, K. P. Skibenko, and T. N. Startseva for the large amount of work done in scanning the emulsions. Orig. art. has: 8 figures and 1 formula.

SUB CODE: 20/ SUBM DATE: 20Jul65/ ORIG REF: 003/ OTH REF: 009

Card 2/2 nst

L 12024-66 EWT(m)/EWA(h)

ACC NR: AP5028001

SOURCE CODE: UR/0386/65/002/007/0347/0351

AUTHOR: Shumilov, S. N.; Klyucharev, A. P.; Rutkevich, N. Ya.

ORG: none

TITLE: Total nuclear decay reactions^{15, 44, 55}

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v red-aktsiyu. (Prilozheniya), v. 2, no. 7, 1965, 347-351

TOPIC TAGS: Alpha decay, nitrogen, boron, nuclear reaction. Alpha particle reaction

ABSTRACT: This is a continuation of earlier measurements (ZhETF v. 45, 1356, 1963) of the cross sections of certain reactions with emission of α particles due to B^{10} ions interacting with light nuclei in emulsion. In the present paper they report a more detailed investigation of the reaction $N^{14} + B^{10} \rightarrow$ $Li^{6} + B^{7}$. Type NIKEI-D nuclear emulsions 400 " thick were bombarded with B^{10} ions accelerated to 100 Mev in the multiply-charged-ion linear accelerator of the Ukrainian Physicotechnical Institute. The emulsions made possible reliable visual discrimination of the tracks of singly-charged or doubly-charged

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L 12024-66

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ACC NR: AP5028001

particles, and of heavier nuclei. From a total of approximately 10,000 stars produced by the interaction between the B^{10} ions and nuclei in the emulsion, they identified, as a result of visual selection, measurement of all the star parameters, and subsequent detailed kinematic analysis, a total of 22 six-pronged stars due to the reaction $N^{14} + B^{10} \rightarrow 6\alpha + 0.4$ Mev, one seven-prong star due to the reaction $N^{14} + B^{10} \rightarrow 5\alpha + 2d - 23.5$ Mev, and one seven-prong star due to the reaction $O^{16} + B^{10} \rightarrow 6\alpha + d - 20.5$ Mev. The kinematic analysis of the stars and all the subsequent calculations were carried out with the "Ural-2" electronic computer. Not a single case of the first reaction was observed at bombarding-ion energy less than 55 Mev, whose cross section increases quite rapidly with increasing bombarding-ion energy, reaching 40 mb at 80 Mev. The only observed case of the second reaction occurred at 80 Mev bombarding-ion energy, and corresponds to a reaction cross section ~ 5 mb. The energy distribution of the particles α , shows that there is a noticeable probability of observation of particles α , with much more than their equal to almost half the total kinetic energy, reaching 20-23 Mev in absolute magnitude. Authors thank V. N. Yemelyanova, K. P. Skibenko, Ye. V. Chernavskaya, Ye. K. Minakova, and T. N. Startseva.

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L 12024-66

ACC NR: AP5028001

for processing the emulsions. Orig. art. has: 3 figures and 3 formulas.

SUB CODE: 18,20/ SUBM DATE: 06Aug65/ ORIG REF: 003

jw

Card 3/3

RUTKEVICH, I.S.; RUTKEVICH, V.G.

Zonality in the Pykhtun iron ore deposit in Gornaya Shoriya.
Geol. i geofiz. no.4:130-132 '60. (MIRA 13:9)

1. Zapadno-Sibirskoye geologicheskoye upravleniye.
(Gornaya Shoriya--Iron ores)

PUTKIEWICZ, J.

Difficult days; health service in the capital ten years ago, p. 4. (ZDROWIE, Warszawa, Vol. 7, no. 2, 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955,
Uncl.

RUTKIEWICZ, Jaroslaw, mgr. inz.

Postulates of designing offices in the field of sewage purification installations with reference to scientific research institutions, construction and use. Gosp wodna 22 no.7:299-301 Jl '62.

1. Biuro Projektow Budownictwa Komunalnego, Katowice.

Rutkiewicz, J.

POLAND/Chemical Technology. Chemical Products. Water Treating.

H-5

Abs Jour : Ref Zhur - Khimiya, 1958, No 22, 74424

Author : Flakowicz J., Genczerzyk J., Rutkiewicz J.

Inst : Not Given

Title : Technical Aspects of Effluent Water Treatment (General Discussion)

Orig Pub : Gas, woda, techn. scnit., 1958, 32, No 1, 19-21

Abstract : No abstract

Card : 1/1

RUTKIEWICZ, J.

New scientific pathways and organization of blood donation. Szpital.
polsk. 3 no.2-3:205-215 1950. (CIML 20:6)

POLAND / Chemical Technology. Cellulose and Its Derivatives. Paper.

H-33

Abs Jour: Ref Zhur-Khimiya, No 23, 1958, 79856.

Author : Swrewicz, W., Rutkofski, J.

Inst : Not given.

Title : Trends in the Development of Cellulose Production Meant For Synthetic Fibers.

Orig Pub: Przegl. papiern., 1958, 14, No 3, 83-91.

Abstract: A review with 45 references.

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ALLACHE, K.

4
6 JUL 1982

4

6

1. "Medical and Political Activities in Information and National Security in the USSR (not identified); pp 9-11.
2. "Medical Progress and the Public Health Sector," Dr. L. ALEXANDROV, Senior Physician of the Ministry of Public Health and Social Welfare (NDSO) Ministry of National Defense's Medical Scientific Associate General; pp 14-18.
3. "The Academic Prize for Scientific Publications," T. S. DUDOV, Journal of Scientific Collaborators (Kadush), NDSM (not identified); pp 19-22.
4. "Treatment by Means of Inhalation with Aerosol Aspirator," Dr. V. V. Tsvetkov, Chief Researcher of the Institute of Hygiene and Epidemiology, Belorussian Academy of Sciences, Institute of Hygiene and Epidemiology (Belorussian Academy of Sciences), Minsk; pp 23-28.
5. "Other Services for Health," Dr. G. V. KALINOV, Doctor of Medicine at the Clinic of the Ministry of National Defense, Moscow; pp 28-34.
6. "Preserving the Health of Miners," Dr. G. V. KALINOV, Doctor of Medicine, Professor, Institute of Hygiene and Epidemiology, Moscow; pp 35-40.
7. "Controlling Infectious Diseases in Coal and Steel Production," Dr. V. V. Tsvetkov, Doctor of Medical Science, Professor, Scientific Institute of Hygiene and Epidemiology, Moscow.
8. "The George and Lee W. Mallin Foundation's International Foundation, A Non-Governmental Organization (unidentified); pp 41-45.
9. "Comparative Quantitative and Qualitative Assessment of Various Methods in Radiobiology," Dr. V. V. Tsvetkov, Doctor of Medical Science, Professor, Institute of Hygiene and Epidemiology, Moscow; pp 46-51.

— 17 —

RUTKOV, V., polkovnik; KOTOLEVSKIY, A., polkovnik

Inculcating the principles of the scientific Weltanschauung
in the students of military schools. Komm. Vooruzh.Sil
3 no.19:56-59 0 '62. (MIRA 15:9)
(Military education)

GIUROV, At.; BONCHEV, L.; DOBREVA, Ek.; IVANOV, S.; ENCHEVA, M.;
RUTKOVA, L.

Obtaining the zinc oxide monocrystals with ammonia as reducing agent. Godishnik mash elekt 12 no. 1:101-106 '62 [publ. '63].

ABDULLINA, N.G.; SULTANOVA, R.Kh.; RUTKOVSKAYA, L.I.; VODILOVA, S.A.

Fractional deposition of a precipitate of nitric acid extracts
from Kara Tau phosphorites. Zhur. prikl. khim. 36 no.5:1096-
1100 My '63. (MIRA 16:8)

(Kara Tau--Phosphorites) (Extraction (Chemistry))

RUTKOVSKAYA, M.Ya.

Position of bands and markings on Jupiter in 1958. Buil.
VAGO no.28:37-41 '60. (MIRA 14:6)

1. Moskovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo
obshchestva, otdel planet i Luny.
(Jupiter (Planet))

RUTKOVSKAYA, N.V. [Rutkovs'ka, N.V.], otv. za vyp.; MINEVICH, M.I.
[Minevych, M.I.], tekhn. red.

[Economy of the city of Kiev; statistical abstract] Narodne
hospodarstvo mista Kyieva; statychnyi zbirnyk. Kyiv, Derzh-
statvydav, 1963. 179 p. (MIRA 17:3)

1. Ukraine. Statisticheskoye upravleniye.

RUTKOVSKAYA, N.V.

Maximum height of the snow cover in the southeastern part of the
West Siberian Plain. Trudy TGU 147:191-202 '57. (MIRA 16'5)

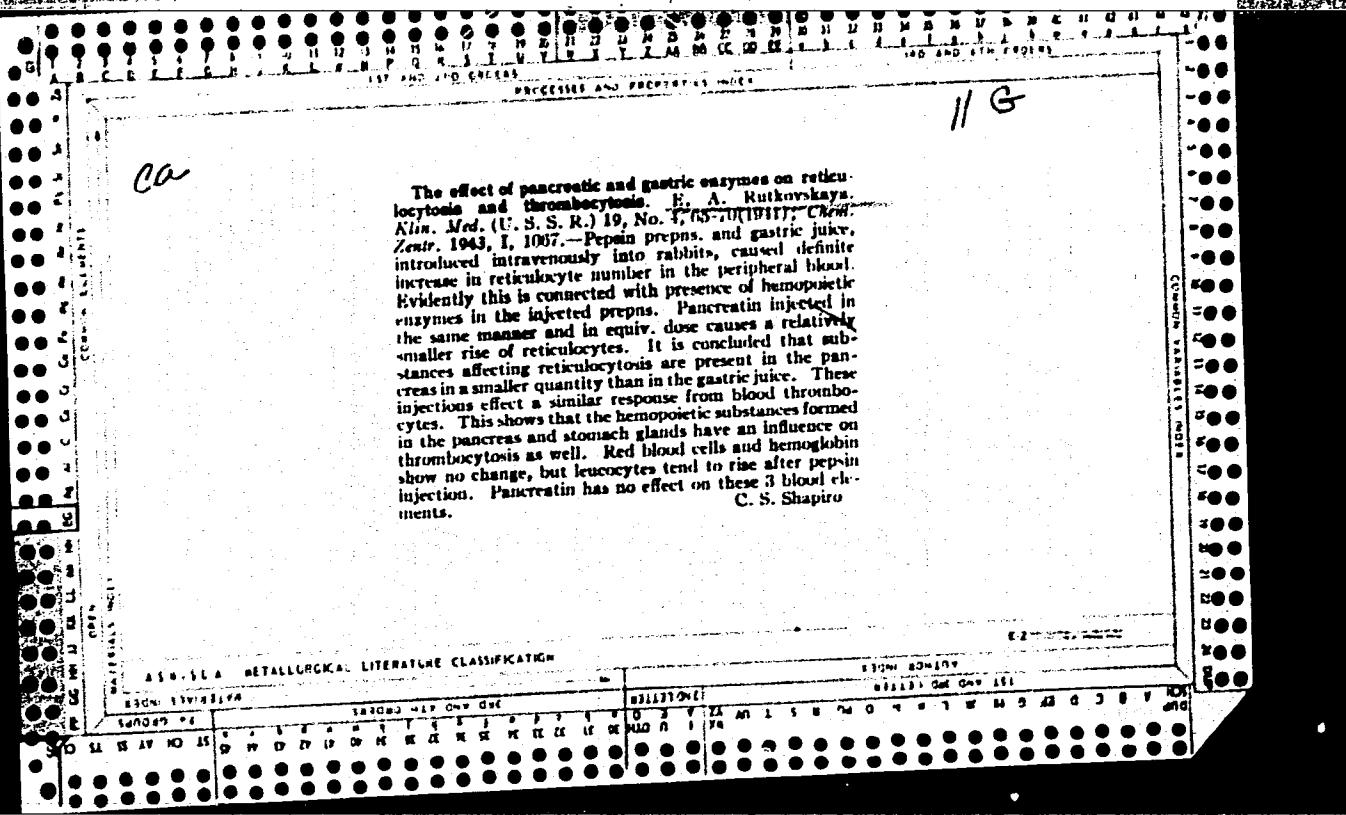
1. Kafedra obshchey geografii Tomskogo gosudarstvennogo
universiteta.

(West Siberian Plain—Snow)

RUTKOVAKIT, S. V.

V

Oil from Lupharis lathyrus L. was investigated by the preparation of the X-ray diffraction patterns and analysis. J. A. P. 1954, 149(11), p. 33. The oil contained 44% triglycerides, 44% glycerol, 10% free fatty acids, 1.1% saponifiable substances 12-15%, and 3.2% unsaponifiable substances 12-15%. The oil has the following composition: Stearic acid no. 0.71 ± 0.01, palmitic acid no. 0.88 ± 0.02, myristic acid no. 6.62, linoleic acid no. 84.63 ± 0.05 and thymoquinone. The oil can be used in the soaps, cosmetics after treatment with alk. It can also be used in the paint industry. A. A. Berezin, escape.



RUTKOVSKI, A
COUNTRY : Romania 1-25
CATEGORY :
ARS. JOUR. : RZKhim, No. 5 1960, No. 19648
AUTHOR : Rutkovski, A.
INST. : Not Given
TITLE : On the Degradation of Fats in Some Types of Fatty Raw Material
ORIG. PUB. : Ind Aliment Prod Anim, ?, No 2, 37-41 (1959)
ABSTRACT : The factors which accelerate the chemical and biochemical degradation (D) of fats are enumerated and the results of studies on the effect of the above factors on the D of animal and vegetable fats are given. It has been found that (1) the D of raw swine fat is basically a fermentation process; D proceeds most intensively in tissues in which the most intensive physiological processes occur (pancreas, colon); (2) the D of salted fat [lard], in contrast to the D of fresh fat, is basically a
CARD: 1/2 342

COUNTRY	:	Rumania	H-25
CATEGORY	:		
ABS. JOUR.	:	BZhKhim, No. 5 1960, No.	19648
AUTHOR	:		
INST.	:		
TITLE	:		
ORIG. PUB.	:		
ABSTRACT	:	chemical process; (3) vegetable oils obtained from mature seeds (S) are more stable than oils obtained from not-fully-ripened S; (4) a lowering of the chlorophyll content in the S leads to increased stability of the oils.	A. Marin
CARD	:	2/2	

ACC NR: AP6029514

SOURCE CODE: UR/0103/66/C00/003/C023/C034

AUTHORS: Rutkovskaya, L. D. (Moscow); Chernyatin, V. A. (Moscow)

ORG: nono

TITLE: On some methods of solving problems of analytic design of controllers

SOURCE: Avtomatika i telemekhanika, no. 8, 1966, 23-34

TOPIC TAGS: automatic control design, mathematic analysis, optimal control, digital computer, algebraic equation, characteristic equation / M-20 digital computer

ABSTRACT: The problem of analytic design of controllers for linear autonomous systems of any order is examined. The problem in vector form is

$$\dot{\eta} = An + mu,$$

where η is an n -vector; A and m are $n \times n$ and $n \times 1$ constant matrices; and u is a scalar, the control action of the controller. Optimum control is defined as

$$u^0(\eta) = -\frac{1}{2} \sum_{k=1}^n m_k \frac{\partial \Psi(\eta)}{\partial \eta_k}.$$

Reduction of the order of nonlinearity of algebraic equations is discussed. The linear transform $\eta = Dy$ reduces the initial system to the form

UDC: 62-551.001.24

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ACC NR: AP6029544.

where

$$\dot{y} = By + m'u,$$

$$B = \begin{pmatrix} 0 & 0 & 0 & \dots & 0 & b_{1n} \\ 1 & 0 & 0 & \dots & 0 & b_{2n} \\ 0 & 1 & 0 & \dots & 0 & b_{3n} \\ 0 & 0 & 1 & \dots & 0 & b_{4n} \\ \dots & \dots & \dots & \dots & \dots & \dots \\ 0 & 0 & 0 & \dots & 1 & b_{nn} \end{pmatrix}, \quad m' = \begin{pmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{pmatrix}.$$

The solution of algebraic equations with selection of an optimizing functional is considered. It is shown that $\alpha_j > 0$ ($j = 1, \dots, n$) is a necessary and sufficient condition for the solvability of the problem of selection of an optimizing functional for the initial system. A second-order system is solved as an example. The authors thank A. M. Letov for formulating the problem and for useful advice. Orig. art. has: 25 formulas, 2 tables, and 1 graph.

SUB CODE: 12, 09/ SUBM DATE: 08Jul65/ ORIG REF: 009

Card 2/2

SHOYKhet, B.A.; SOLOGUBENKO, L.Ye.; RUTKOVSKAYA, L.M.

Production of magnesium sulfate by carbonation of a saline brine
of gypsum-magnesia concentrates. Ukr.khim.zhur. 29 no.6:651-658
'63. (MIRA 16:9)

1. Gosudarstvennyy institut prikladnoy khimii.
(Magnesium sulfate)

SHOYKHET, B.A.; ARAV, R.I.; TSYGONIY, L.D.; RUTKOVSKAYA, L.M.

Desulfation of Sivash brine during its complex treatment.
Ukr. khim. zhur. 29 no.2:214-219 '63. (MIRA 16:6)

1. Gosudarstvennyy institut prikladnoy khimii, Yevpatoriya.
(Sivash region—Brines) (Sulfates)

STEPANYAN, L.A., red.; ARUTYUNYAN, A.B., red.; BAGDASARYAN, A.B., prof., doktor geogr. nauk, glav. nauchnyy red.; DAVTYAN, G.S., red.; MARTIROSYAN, G.M., red.; MARUKHIAN, A.O., red.; MVRTCHYAN, S.S., red.; URUSOV, V.V., red.; SHAKHBAZYAN, M.S., red.; ALLAKHVERDYAN, G.O., kand. ekonom. nauk zam glav. nauchnogo red.; ARUTYUNYAN, N.Kh., akademik, red.; VALEYAN, L.A., kand. geogr. nauk, red.; DUL'YAN, S.M., kand. geogr. nauk, red.; YEREMYAN, S.T., red.; ZOGRAEYAN, L.N., kand. geogr. nauk, red.; KOCHARYAN, G.A., prof., red.; POGOSYAN, Kh.P., prof., doktor geogr. nauk, red.; RUTKOVSKAYA, M.S., starshiy red.; SAVELO, A.F., tekhn. red.; YAROSHEVICH, K.Ye., tekhn. red.

[Atlas of the Armenian Soviet Socialist Republic] Atlas Armianskoi Sovetskoi Sotsialisticheskoi Respubliki. Erevan, Akad. nauk Armianskoi SSR; glav. upr. geodez. i kartografii MG i OM SSSR, 1961. 111 p.
(MIRA 15:2)

1. Minskaya kartograficheskaya fabrika Glavnogo upravleniya geodezii i kartografii Ministerstva geologii i okhrany nedr SSSR (for Urusov).
2. Akademiya nauk Armyanskoy SSR (for Arutyunyan). 3. Chlen-korrespondent AN Armyanskoy SSR (for Yeremyan).

(Armenia—Maps)

RUTKOVSKAYA, M.S.

Practice of working on comprehensive atlases of the Union Republics
and provinces. Geod. i kart. no.7:38-41 J1 '63. (MIRA 16:8)
(Russia--Maps)

RUTKOVSKAYA, M.Ya.(Moskva)

Jupiter in 1959. Biul.VAGO no.25:19-23 '59.

(MIRA 13:3)

1. Moskovskoye otdeleniye Vsesoyuznogo astronomo-geodezi-
cheskogo obshchestva, otdel planet.
(Jupiter (Planet))

Butkovskaya, M.YA.

3(1) P.2.

PHASE I BOOK EXPLOITATION

SOV/3011

Vsesoyuznoye astronomo-geodezicheskoye obshchestvo

Byulleten', no. 25 /32/ (Bulletin of the All-Union Astronomical and Geodetic Society, Nr 25 / 32/) Moscow, Izd-vo AN SSSR, 1959. 50 p. 1.500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Editorial Board: V.V. Fedynskiy (Resp. Ed.), M.S. Bobrov (Deputy Resp. Ed.), M.M. Dagayev, I.T. Zotkin, A.A. Izotov, P.P. Parenago, P.I. Popov, V.A. Bronshtein (Scientific Secretary)

PURPOSE: This booklet is intended for astronomers and geophysicists.

COVERAGE: This is a collection of 14 articles on various questions in astronomy. Among the problems treated are: determining the age of lunar formation by analyzing meteoritic crater distribution, atmospheric extinction in the observance of noctilucent clouds, star brilliance, solar cycles, meteor and comet studies. There is an article on the 12th Moscow Astronomical Olympiad competition for students of astronomy and geodesy. References accompany individual articles.

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Bulletin of the All-Union (Cont.)

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Chistyakov, V.F. Separating the Statistical Regularities of Solar Cycles Into Two Types	12
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Bulletin of the All-Union (Cont.)

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Tomchuk, L.G. Notes on an Unknown Empirical Law

46

Review

Portsevskiy, K.A. The Twelfth Moscow Astronomical Olympic Competition of 1958

AVAILABLE: Library of Congress

Card 4/4

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1-27-60

RUTKOVSKAYA, N.V. [Rutkovs'ka, N.V.]; POLESHCHUK, M.V., *glav. red.*;
MINEVICH, M.I. [Minevych, M.I.] *tekhn. red.*

[Economy of the city of Kiev; statistical collection] Na-
rodne hospodarstvo mista Kyieva; statystichnyi zbirnyk.
Kyiv, Derzh. stat. vyd-vo, 1960. 150 p. (MIRA 14:5)

1. Kiev. Statisticheskoye upravleniye. 2. Nachal'nik Statisti-
cheskogo upravleniya goroda Kiyeva (for Poleshchuk)
(Kiev--Statistics)

DARAGAN, M.V.; RUTKOVSKAYA, N.V.; BRONSHTEYN, P.B.; PRIVEZENTSEVA, A.G.,
red.; PYATAKOVA, N.D., tekhn.red.

[Labor statistics in industry and construction] Statistika truda
v promyshlennosti i stroitel'stve. Moskva, Gosstatizdat TsSU SSSR,
1960. 122 p. (MIRA 13:9)

(Industrial statistics)

s/169/62/000/012/086/095
D228/D307

AUTHOR: Kutkovskaya, N.V.

TITLE: Melting and disappearance of the snow cover in the south-east of the West Siberian Plain

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 59, abstract 12V363 (In collection: Snezhn. pokrov, yego rasprostr. i rol' v nar. kh-ve, N., AN SSSR, 1962, 104-113)

TEXT: The conditions in which the snow cover melts in the Novosibirskaya oblast', the Tomskaya oblast', the plains of the Altayskiy kray, and the far north of the Kemerovskaya oblast' are considered. On this territory the total duration of the thaw varies from 50 days in the north to 30-32 days in the south. Caking, temporary thawing, and the impregnation of snow with water occur in the period of snow consolidation (from the time when the depth of the snow cover is maximal up to the accumulation of maximum water reserves in it). This involves a considerable increase in the den-

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D228/D307

Melting and disappearance ...

sity of snow and a decrease in the albedo from 0.7 to 0.4. The average duration of this period is 10 days. In steppe and forest-steppe melting begins in the third 10-day period of March under the effect of radiation, when the mean daily temperature is negative (from -10 to -7°). From the middle of the first 10-day period of April melting continues under the prolonged day temperatures. Disintegration of the stable snow cover occurs in the first half of April, 4-5 days before the mean daily air temperature, which varies from 0 to 2° at this time, changes through 0° . In the forest zone melting starts in the first 10-day period of April, but at a higher mean daily air temperature (from -6 to -4°). Disintegration of the stable snow cover occurs at the end of April when the mean daily air temperature rises to 5° , 5-7 days after it has changed through 0° . In the conditions of the continental climate of the West Siberian Plain disintegration of the stable snow cover, and its final disappearance, is observed simultaneously with the preservation of individual masses of snow. The complete disappearance of the snow cover occurs in the second half of April in the south of the territory under consideration; in the north it takes place in the first

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Melting and disappearance ...

S/169/62/000/012/036/095
D228/D307

10-day period of May. In the north it ends 5 days after the mean daily air temperature becomes positive and rises to 3.2-5.5° in the forest zone and to 1.5-4° in steppe and forest-steppe, when the air temperature at 15 hrs reaches 6-8 and 5-8° respectively. In steppe and forest-steppe the earliest complete disappearance of the snow cover is possible in the second half of the third 10-day period of March; in the forest zone it can happen in the first half of April. The latest time when the snow cover disappears in steppe and forest-steppe is at the end of the second 10-day period of May and at the beginning of the third. On the territory of the forest zone it is at the end of the third 10-day period of May and in the first 10-day period of June. 12 references.

[Abstracter's note: Complete translation.]

Card 3/3

RUTKOVSKAYA, N. V.

RUTKOVSKAYA, N. V.: "The climatic characteristics of the snow cover of the southeastern portion of the west-Siberian lowland." Tomsk State U imeni V. V. Kuybyshev. Tomsk, 1956. (Dissertation for the Degree of Candidate in Geographical Science)

Source: Knizhnaya Letopis' No. 28 1956 Moscow

POPOVA, K.I.; RUTKOVSKAYA, N.V.

Relationship between precipitation and the circulation regime
during the cold period over the southeastern part of the West
Siberian Lowland. Trudy GGO no.113:22-30 '60. (MIRA 14:3)
(Siberia, Western—Snow)

RUTKOVSKIY, L.A. (Ordzhonikidze)

Cardiovascular diseases as a cause of temporary disability. Sov.
zdrav. 21 no.8:35-40 '62. (MIRA 15:11)

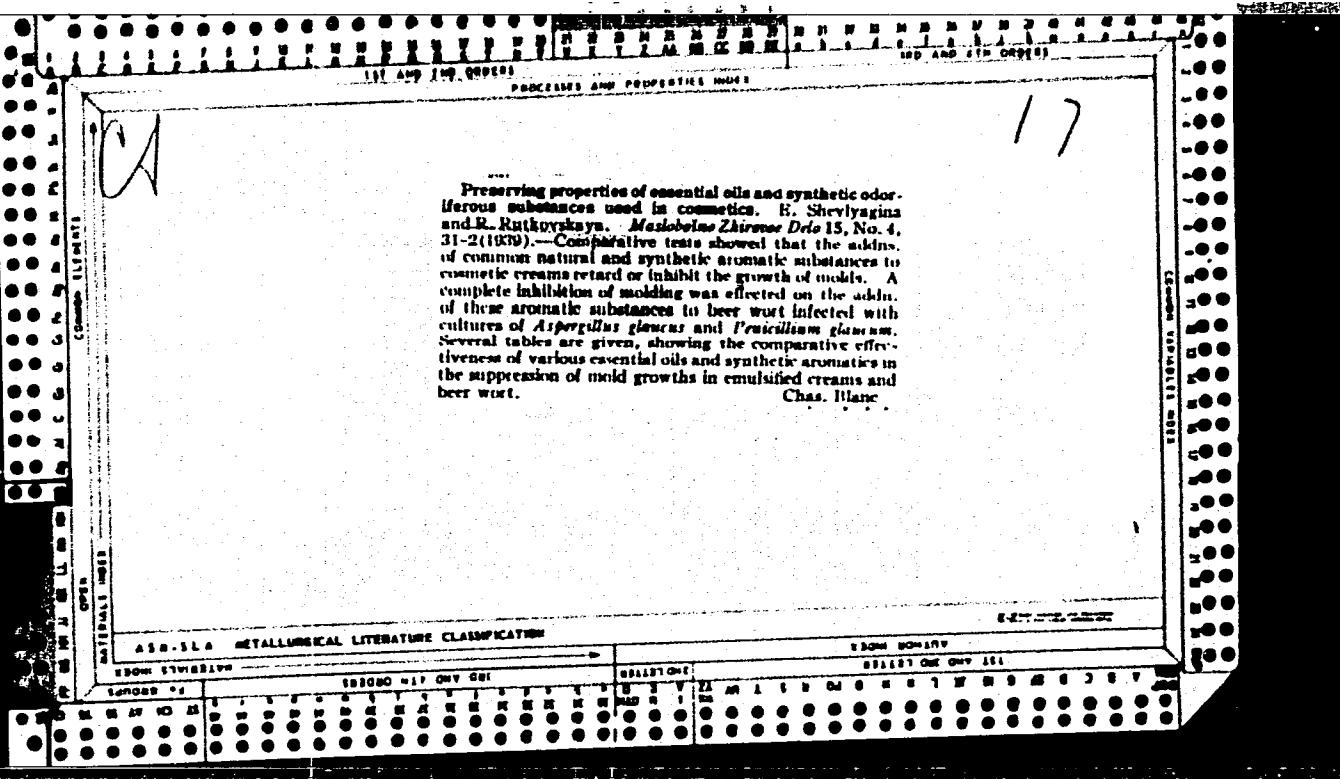
1. Iz zheleznodorozhnay bol'nitsy Ordzhonikidze.
(CARDIOVASCULAR SYSTEM—DISEASES)(DISABILITY EVALUATION)

RUTKOVSKIY, O.O., uchitel'

Forming the basis of the dialectic materialistic views of students
during the lessons on the geography of the U.S.S.R. Geog. v
shkole 26 no.1:30-36 Ja-F '63. (MIRA 16:5)
(Physical geography--Study and teaching)

BOGDANOVA, V.I.; DOVGYALLO, V.P.; KUL'ZHONKOV, Ye.O.; POPOV, Ye.I.;
RUTKOVSKIY, O.O.; SPEVACHEVSKIY, G.Yu.; NAZAREVSKIY, O.R.,
retsenzent; TRIFONOV, V.I., retsenzent; LEVITAS, I.G., red.;
USENKO, L.A., tekhn. red.

[Moscow - Central Asia; railroad guide]Moskva - Sredniaia
Aziia; zheleznodorozhnyi putevoditel'. Moskva, Transzhel'dor-
izdat, 1962. 205 p. (MIRA 16:3)
(Railroads—Guides)



PASHININA, Ye.I.; SHEVLYAGINA, Yo.V.; RUTKOVSKAYA, R.A.

Use of the Khotuntsev-Pushkin colloid mill in the production of toothpastes. Trudy VNIISNDV no.6:173-179 '63. (MIRA 17:4)

SHEYER, A.A.; RUTKOVSKAYA, R.A.; BOYARSKAYA, M.M.; YAKOVLEVA, G.S.

Cosmetic creams for the protection of facial skin from ultraviolet rays. Masl.-zhir.prom. 26 no.5:36-39 My '60. (MIRA 13:12)

1. Moskovskaya fabrika "Svoboda."
(Cosmetics)

PASHININA, Ye.I.; SHEVLYAGINA, Ye.V.; RUTKOVSKAYA, R.A.

Efficient methods for preparing emulsifying creams. Report No.1:
Meleshin's device for cooling emulsifying creams of the water-oil
type. Trudy VNIISNDV no.5:161-165 '61. (MIRA 14:10)
(Cosmetics) (Emulsifying agents)

BESKRCVNYY, L.D., inzh.; KORSAKOVA, T.M., inzh.; LEBEDEV, N.V., inzh.; PETROVA, Ye.P., inzh.; RUTKOVSKAYA, R.F., inzh.; FIGMAN, G.Ya., inzh.; SHTIVEL', C.B., inzh.; ISEYEVA, R.Kh., red.izd-va; SALAZKOV, N.P., tekhn. red.

[City streets and roads; their construction] Gorodskie ulitsy i dorogi; konstruktsii. Moskva, Izd-vo M-va kommun.khoz. RSFSR, 1963. 25 p. (MIRA 16:8)

1. Russia (1917- R.S.F.S.R.) Upravleniye blagoustroistva gorodov RSFSR.
(Streets) (Road construction)

RUTCHENKAYA, S. V.

MITROVSKAYA, S. V. "On the anatomic structure of the seed pod of the genus Citrullus", Sbornik nauch.-issled. rabot (Azovo-Chernor. s.-kh. in-t), XII, 1948, p. 111-30, - Bibliog: 6 items.

SO: U-4343, 19 August 53, (Letopis 'Zhurnal 'nykh Statey', No. 22, 1949).

1. RUTKOVSKAYA, V. A.
2. USSR (600)
4. Soil Percolation
7. Studying soil percolation in the subsoil boulder loam. Pochvovedenie No. 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

RUTKOVSKAYA, V.A.

Change of climate and climatic trends. Meteor. i gidrol. no.
10:59-63 O '56. (MLRA 9:12)

(Climatology)

RUTKOVSKAYA, V.A.

Improvement of the water cycle of the rivers in the mountainous regions of the Crimea. Izv. AN SSSR Ser. geog. no.2:106-112 Mr-Ap '57.

(MIRA 10:12)

(Crimea--Rivers)

RUTKOVSKAYA , V.A.

Effect of reservoirs on the annual distribution of runoff of the
Volga River at the gauge line in the lower bay of the Stalingrad
Hydroelectric Power Station. Sbor. rab. po gidrol. no.1:76
(MIRA 15:2)
79 '59.

1. Institut okeanologii AN SSSR.
(Volga River—Runoff)

3(9)

AUTHORS: Rutkovskaya, V. A., Chukovenko, P. V. SCV/50-59-6-12/17TITLE: Installation for the Observation of Radiation on Reservoirs
(Radiatsionnaya ustavok dlya nablyudeniy na vodoyemakh)

PERIODICAL: Meteorologiya i hidrologiya, 1959, Nr 6, pp 45 - 49 (USSR)

ABSTRACT: The general scheme of the mentioned installation serving for actinometric observations of the water surface was worked out with the assistance of Yu. D. Yanishevskiy and by taking into account the recommendations contained in the papers (Refs 1,2, 3 and 4). The definite scheme was worked out by the authors advised by M. S. Averkiyev and A. A. Luchshev. The main task to be solved was that of carrying out complete observations of the albedo and the radiation balance. The installation is very accurately described here. Observations of the radiation balance of the Rybinskoye vodokhranilishche (Rybinsk Reservoir) were made by V. A. Rutkovskaya in summer 1958 on the expedition ship "Akademik S. I. Vavilov" of the Institut biologii vodokhranilishch AN SSSR (Institute of Reservoir Biology of the AS USSR). It is a 100 t ship; the actinometric equipment was astern. The total and reflected radiation as well as the radia-

Card 1/2

Installation for the Observation of Radiation on
Reservoirs

SOV/50-59-6-12/17

tion balance were measured. The instruments used were the thermoelectrical pyranometer, a portable albedometer and the balance meter (balansomer) devised by Yu. D. Yanishevskiy. The data obtained were compared with the records of Cape Rozhnovskiy. There are 5 figures and 4 Soviet references.

Card 2/2

RUTKOVSKAYA, V.A.

Extra-long-range forecasting of the level of the Caspian Sea
taking into consideration the solar factor. Trudy Inst. okean.
37:65-72 '60. (MIRA 14:8)
(Caspian Sea--Hydrology) (Sun)

RUTKOVSKAYA, V.A.

Influence of physicogeographical factors on the albedo of the
inland reservoirs and some seas. Izv. AN SSSR. Ser. geog
no.1:72-80 Ja-F '62. (MIRA 15:2)

1. Institut geografii AN SSSR.
 (Albedo)
 (Reservoirs)
 (Ocean)

RUTKOVSKAYA, V.A.

Some radiation properties of lakes, reservoirs, and seas.
Trudy Inst. okean. 57:117-132 '62. (MIRA 16:10)

L 38181-66 EWT(1) GW

ACC NR: AT6012606

(N)

SOURCE CODE: UR/2566/65/078/000/0245/0274

34
B+1

AUTHOR: Rutkovskaya, V. A.

ORG: none

TITLE: Solar radiation penetration of land and sea water basins

SOURCE: AN SSSR. Institut okeanologii. Trudy, v. 78, 1965. Issledovaniya atmosfernoy tsirkulyatsii i prizemnogo sloya vozdukha nad Tikhim i Indiyskim okeanami (Studies of atmospheric circulation and the boundary layer of air over the Pacific and Indian Oceans), 245-274

TOPIC TAGS: solar radiation absorption, solar radiation intensity, fresh water, sea water

ABSTRACT: Intensity of the total solar radiation is investigated using a thermoelectric pyranometer possessing the same sensitivity over the 0.29-3.0 μ range. The data show that 99% of the total incident radiation is absorbed in fresh-water basins by water layers with thicknesses from 0.5 m (Beloye Ozero) to 6 m (Volgogradskoye reservoir); however, the Alpine-type lakes, the East Siberian Sea, and the Black Sea show the presence of 4 to 10%, 4%, and 1% solar radiation at depths of 8-10 m, 4 m, and 33 m, respectively. The values of the mean indicators of vertical attenuation (α/m) vary from 0.08 (Black Sea) to 10.2 (Beloye Ozero). The data in the study are

Card 1/2

APPROVED FOR RELEASE 06/20/2000

KOZINA, A.M.; RUTKOVSKAYA, Ye.P.

Investigating rock pressure control in auger mining by means of
modeling. Fiz. mekh. svois., dav. i razr. gor. porod. no.2:163-
174 '63. (MIRA 17:1)

IL'SHTEYN, A.M., kand.tekhn.nauk; KOZINA, A.M., kand.tekhn.nauk;
RUTKOVSKAYA, Ye.P., inzh.

Modeling rock pressure manifestations occurring in the Moscow
Basin. Nauch.sob.Inst.gor.dela 7:72-83 '61. (MIRA 15:1)
(Moscow Basin--Rock pressure)

KUPERMAN, P.I.; GRYAZNOV, N.S.; MOCHALOV, V.V.; FROLOV, V.V.; MUSTAFIN, F.A.; PUSHKASH, I.I.; SLAVGORODSKIY, M.V.; LAZAREV, B.L.; BORISOV, V.I.; Prinimali uchastiye: CHERKASOV, N.Kh.; ZABRODSKIY, M.P.; RYTCHENKO, A.I.; RUTKOVSKAYA, Ye.N.; SAITBURGANOVA, N.I.; SHTAGER, A.A.; SHISHLOVA, T.I.; BUDOL', Z.P.; MEN'SHIKOVA, R.I.; GORELOV, L.A.; AGARKOVA, M.M.; KOUROV, V.Ya.; KOGAN, L.A.; BEZDVERNYY, G.N.; POKROVSKIY, B.I.

Effect of the lengthening of the coking time on the coke quality and testing of coke in the blast furnace process. Koks i khim. no.9: 23-28 '63. (MIRA 16:9)

1. Vostochnyy uglekhimicheskiy institut (for Kuperman, Gryaznov, Mochalov, Kogan, Bezdvernyy, Pokrovskiy).
2. Ural'skiy institut chernykh metallov (for Frolov).
3. Nizhne-Tagil'skiy motallurgicheskiy kombinat (for Mustafin, Pushkash, Slavgorodskiy, Lazarev, Cherkasov, Zabrodskiy, Rytchenko, Rutkovskaya, Saitburganova, Shtager, Shishlova, Budol', Men'shikova).
4. Koksokhimstantsiya (for Borisov, Gorelov, Agarkova, Kourov).
(Coke—Testing)

RUTKOVSKIY, B.

Using rope enclosures in assembling large-panel and large-block
buildings. Na stroi. Mosk. 1 no.4:27 Ap '58. (MIRA 11:9)

1.Nachal'nik stroitel'nogo uchastka - 3 tresta Moszhilstroy.
(Building--Safety measures)

RUTKOVSKIY, B. [Rutkovs'kyi, B.]

Bortniki irrigation system. Znan. ta pratsia no.5:11 My '62.
(MIRA 15:6)

(Bortniki region (Ukraine)—Sewage as fertilizer)

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RUTKOVSKIY, B. [Rutkovs'kiy, B.], kand.tekhn.nauk

Spillways of earth dams. Sill'. bud. 8 no.2:21-22 F '58.

(MIRA 13:7)

(Dams)

(Spillways)

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CIA-RDP86-00513R001446210004-9"

RUTKOV'S'KIY, B., kandidat tekhnichnikh nauk.

Construction of reservoirs to serve the needs of agriculture.
Sil'. bud.no.6:14-17 S '55. (MIRA 9:7)
(Hydraulic engineering) (Irrigation)

KLISENKO, Yu.F.; PIDZHIYANTS, S.A.; RUTKOVSKIY, B.I.; RYBAL'SKIY, V.I.;
SAPOZHNIKOV, F.V.; SLIPCHENKO, P.S.; SHIMKEVICH, K.A.

Flow-line construction of large thermal electric plants. From.
stroi. 39 no.10:8-13 O '61. (MIRA 14:10)

1. Yuzhenergostroy (for Klisenko). 2. Akademiya stroitel'stva i
arkhitektury USSR (for Pidzhiyants, Rutkovskiy, Rybal'skiy,
Slipchenko). 3. Glavenergoprojekt (for Sapozhnikov). 4. Orgen-
ergostroy (for Shimkevich).

(Building) (Electric power plants)

RUTKOVSKIY, B.I. (Kiyev)

Swelling of packed soils [with summary in English]. Pochvovedenie
no. 4:46-54 Ap '59. (MIRA 12:7)
(Soil physics)

RUMOVSKIY, B. [Rumovskiy, B.], konf. tekhn. nauk

Drainage, discharge, and sinking of water in constructing farm buildings. Sil'. bud. no. 3:14-16 Kr '52. (MIA 12:7)
(Drainage) (Water, Underground)

14(10)

SOV/98-59-7-4/22

AUTHOR: Neporozhniy, P. S., Rutkovskiy B. I., and El'b, N. K.
Engineer

TITLE: Rubber Caulking for Warping Seams in Canal Linings

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 7, pp 18
- 22 (USSR)

ABSTRACT: The process described is one applied in this case to the North Donets-Donbass canal, which is lined with sectional ferro-concrete sheets, with provision for draining (Fig 1). In view of the necessity for good draining, the caulking of the concrete sheets is of extreme importance, and the use of rubber for this purpose, for the first time in the USSR but common now in many countries, has proved to be preferable due to its durability, flexibility, cheapness and its waterproof properties. Fig 2 shows the tapered edge of the concrete sheets and the 7x2 cm. recesses cut into them, into which 2mm thick rubber strips are affixed by means of an adhesive and sealed with a metal-reinforced sand/cement mixture. Three alternative methods of sealing are given, all of which proved to be unsuited for the purpose. The width of

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the free (unglued) part of the rubber strip (see Fig 2) is determined by the formula

$$b = \frac{S \times k \times 100}{\Delta l} + a$$

where b = the width of the free part of the strip; S = the greatest relative amount of slip between plates, in cm.; k = coefficient of heterogeneity of the caulking material; Δl = the relative elongation of the rubber at breaking-strain, in %; a = breadth of the caulk between plates. The thickness of the rubber strip was determined according to the formula

$$\frac{P}{F} = \frac{\sigma}{k}$$

where P = pressure on caulk in kgs.; F = the area of the cross-section of the caulk; σ = breaking strain in kgs/cm². Blowtorches, autogenous welding apparatus and electric reflector lamps are used to ensure absolute dryness of the concrete base prior to adhesion of the rubber, and the surfaces of the recesses

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are smoothed out by an electric grinding-tool to the nearest 2-3 mm. A brief description of the preparation of the rubber, its cutting into strips, the smoothing-out of one side and the application of the adhesive is then given, and Fig 3 shows a 12kg roller used for rolling the strips flat once glued in place. It is stressed that the time factor is all-important in the process in order to provide for the correct amount of set in the adhesive. The reinforced concrete mixture described above is then inserted on top of the strips. Figures are given for the cost, amount and dimensions of the rubber used. In the case of monolithic concrete casing-sheets the process is simpler, special cylindrically-edged rubber strips being inserted directly in between two halves of the concrete slabs as they are molded, and then laid in one piece (Fig 4), with tarred plywood separating the concrete sheets when they are in place. The article ends with a note on the properties required of the rubber and adhesive used in the process. There are 3 photographs, 2 diagrams, and 2 tables.

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RUTKOVSKIY, Boleslav Iosifovich; SLIPCHENKO, Pavel Stepanovich;
SURYGINA, E., red.

[Practices in the building of the Northern Donets-Donets
Basin Canal] Opyt stroitel'stva kanala Severnoi Donets -
Donbass. Kiev, Gosstroizdat, 1964. 178 p.
(MIRA 18:6)

TYULENEV, M.A., doktor sel'khoz. nauk, prof., otv. red.;
ALPAT'YEV, S.M., kand. sel'khoz. nauk, otv. red.;
LAPA, I.Z., kand. sel'khoz. nauk, red.; NOSHINSKIY,
K.P., kand. tekhn. nauk, red.; PLETENIYEV, B.I., kand.
tekhn. nauk, red.; SAMOKHVALENKO, S.K., kand. sel'khoz.
nauk, red.; ORLOVA, N.A., kand. tekhn. nauk, red.;
MOKIYAK, V.I., kand. tekhn. nauk, red.; SUSHEKO, I.S., red.

[Materials of the Joint Conference of Young Scientists in
the Field of Melioration and Hydraulic Engineering] Materialy
ob"edinennoi nauchno-tehnicheskoi konferentsii molodykh na-
uchnykh rabotnikov v oblasti melioratsii i gidrotekhniki.
Kiev, Urczhai. Nos. 1 - 2. 1964. (MIRA 18:3)

1. Ob'edinennaya konferentsiya molodykh nauchnykh rabotnikov
v oblasti melioratsii i hidrotekhniki, Kiev, 1963. 2. Chlen-
korrespondent AN Ukr.SSR (for Tyulenev).

RUTKOVSKIY, B.T., kand.tekhn.nauk

Determination of the coefficients of overburden and volumes of
work in a pit. Gor. zhur. no.9:16-20 S '63. (MIRA 16:10)

1. Kemerovskiy gornyy institut.

RUTKOVSKIY, B.T.

Graphic analysis method for drawing up a schedule of mining
operations for strip mines with inclined and flat deposits.
Gor. zhur. no.11:14-18 N '64. (MIRA 18:2)

1. Kemerovskiy gornyy institut.

RUTKOVSKIY, Boris Vladimirovich, inzhener; NIKOLAYEV, V.A., inzhener,
nauchnyy redaktor; YUDINA, L.A., redaktor izdatel'stva; STEPANOVA,
E.S., tekhnicheskiy redaktor

[Experience in building frame and panel houses] Opyt montazha
karkasno-panel'nykh domov. Moskva, Gos.izd-vo lit-ry po stroit.
i arkhit., 1957. 34 p. (MLRA 10:8)
(Precast concrete construction)

RUTKOVSKIY, D. (Saratov); SKVORTSOV, N. (Saratov)

Confidence. Ochr.truda i sots.strakh. no.12:55 D '59.
(MIRA 13:4)

(Baland--Repair and supply station)

RUTKOVSKIY, F., pensioner; KURNOSOV, M.; DROZDOV, V.; PIKULIN, F.(Gor'kiy);

We offer the following solution. Sov.profsoiuzy 7 no.23:
37 D '59. (MIRA 12:12)

1. Tekhnicheskiy inspektor Mosoblprofsoveta (for Kurnosov).
2. Instruktor Belorusskogo respublikanskogo soveta profsoyuzov
(for Drozdov).
(Labor laws and legislation)